

ASHBY. (T. A.)

LAPAROTOMY FOR ASCITES,

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MEMBER OF AMERICAN GYNECOLOGICAL SOCIETY, ETC.,
OF BALTIMORE.

(Presented to the American Gynecological Society, September, 1888.)

(Reprinted from the *American Journal of Obstetrics*, January, 1889.)



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LAPAROTOMY FOR ASCITES.

The accumulation of ascitic fluid within the abdominal cavity is of such frequent occurrence that the clinical study of this condition must at times claim the serious attention of the gynecologist. Ascites exists in deference to a number of causative influences. Its treatment must, therefore, be undertaken out of respect to conditions which may or may not come within the scope of the diagnostician's knowledge.

By far the most frequently recognized source of abdominal dropsy is obstruction of the portal circulation, induced by structural changes in the liver, leading to compression of the portal capillaries and consequent transudation of the watery elements of the blood through the obstructed vessel-walls. Cirrhosis, therefore, ranks as the most potent cause of ascites. Next to this influence, any other condition which induces a compression or destruction of the portal vessels will cause the same result, such, for example, as syphilitic and cancerous degeneration of the hepatic tissues. But apart from the conditions of the liver, which are by far the most frequent causes of ascitic accumulations, there are other influences at work which may cause either slow or rapid accumulations of fluid within the abdominal cavity, and which call for an early interpretation and prompt removal. Omitting from present consideration those conditions of the heart, spleen, and kidneys which may produce ascites, I shall consider only those conditions of the pelvic organs which have been recognized as having this influence. It may be stated as an axiom that abdominal dropsy is the result of an obstructed circulation, except only in those cases in which it results in connection with a serous inflammation. Thus effusions

occur in peritonitis, whether acute or chronic, cancerous or tuberculous, and are not directly dependent upon mechanical causes. The mechanical influence at work in the production of the effusion should be sought for in all cases in which ascites cannot be referred to inflammatory or structural tissue changes.

The frequency with which ascites occurs in connection with ovarian cystomata, fibroid growths, and other pathological changes in the pelvic cavity invests the consideration of this subject with an important bearing upon the work of the gynecologist. The field of scientific work is constantly widening, and in the grasp of this condition of ascites, as of many others, the physician, the surgeon, and the gynecologist meet upon a common plane. To the elucidation of this subject each branch of the science may bring its offerings, and from the whole we may construct a practical rule of work which will guide each specialist in the comprehension of the subject presented to him. The physician may claim that the symptom under discussion is the result of such structural changes in well-known organs, as the liver, spleen, heart, or kidneys, as to place the treatment of this class of patients under a strictly therapeutical regime. The surgeon may, with equal emphasis, assert that the association of abdominal dropsy with intra-abdominal growths is an indication of the uselessness of drugs and a sufficient plea for the use of the knife. The gynecologist, whose special province is the pelvic region and female pelvic organs, has learned by practical experience the frequent association of abdominal dropsy with ovarian cysts, fibroids, and other structural changes in the generative apparatus, and must equally approach the treatment of this symptom from a surgical standpoint. It will, therefore, become a nice question to determine when to discontinue an almost profitless therapy and when to call into play the resources of surgery. Were the causative influences apparent in every case and a strict diagnosis possible, the assignment of these cases to the physician or to the surgeon would occur after an equitable method.

The successful management of so grave a symptom as ascites wholly depends upon an ability to ascertain and to remove the cause. The various influences at work must receive careful attention. Medication may be tried and be found wanting; palliation by paracentesis may temporarily succeed, and in this wise aid in restoring comfort, yet the great cause may continue its operation, the medical attendant having no satisfactory knowledge as to what this causative influence is. Eliminating from the history of the case the most frequent causative conditions, such as cirrhosis, heart and kidney changes, the physician will now and then approach cases in which the origin of the effusion is involved in profound doubt. The symptom exists, but nothing within reach by manual manipulation or physical signs can reveal any form of abdominal tumor or structural change to account for the same. Under such circumstances are we justified in doing laparotomy to aid in a more thorough exploration of the abdominal and pelvic viscera with the object in view of determining the cause of the serous effusion? This is an important question, and, in answering it in the affirmative, I wish to make no claim for an indiscriminate practice. Exploratory laparotomy should never be undertaken until all other methods of diagnosis have been found inefficient, and even then we should have a reasonable assurance that the information sought for can only be found by this method. Approaching a laparotomy from this standpoint, we may be able to obtain results absolutely impossible by other methods. So long as ascites is a symptom, and not a disease, it will come within the possibility of an actual cure. In itself a most distressing complication of intra-pelvic or intra-abdominal growths, how often do we see it entirely removed by an oöphorectomy for fibroids or an ovariectomy? The cause removed, the symptom disappears. But it is not with this aspect of this condition that I wish to deal at any length. Ovarian tumors demand removal for other reasons than abdominal dropsy. The same, however, cannot always be strictly said of fibroid growths. Abdominal effusions, the results of such growths, in many cases, clearly demand an

oöphorectomy or hysterectomy to check or remove the mechanical cause of the exudation. An ascitic accumulation dependent upon a mechanical cause may only be within reach by mechanical interference, and with this idea in view the surgeon must aim to secure a result by operative methods. The important point is to determine in advance, if possible, what is the nature of this mechanical influence. If this fact cannot be ascertained without a laparotomy, the adoption of this procedure presents a claim upon our attention, and we are in duty bound to consider its advantages. The question will arise, Does the risk involved in an exploratory incision overbalance the probable advantages which may result from the information it is likely to impart? I shall not call in the aid of a long list of statistics to guide us to the answer of this question, but relying upon the growing experience of the profession, axiomatically assert that exploratory laparotomy, carefully and aseptically performed, is, comparatively speaking, free from danger, and should be undertaken in all cases in which the surgeon has a reasonable hope of rendering a service commensurate with the risks it imposes. In abdominal accumulations the peritoneum is more tolerant of interference than in other conditions, and septic processes are less likely to result, hence we approach a laparotomy under conditions more favorable than those usually found. Peritonitis is an unfrequent result of abdominal paracentesis. When aroused in the wake of this procedure, an explanation will readily be found in the methods employed. The mere opening of the abdominal walls with the knife has become one of the safest procedures in abdominal surgery, and gives such results that a growing experience has demonstrated it to be admissible as an invaluable aid to diagnosis. If it be strictly within the province of scientific work to explore the abdominal cavity for the elucidation of such symptoms as pain, reflex-disturbances, and other intra-abdominal conditions, an equal claim should be established for the practice of a procedure which may enable the surgeon to remove the cause of such a symptom as ascites.

I have not deemed it necessary to prove the above statement

by the use of figures, but as our knowledge is widened by experience a recital of the following case in this connection will prove of interest, by way of illustration, since it presents the most conclusive evidence of the value of an exploratory laparotomy in the treatment of the symptom under consideration.

Miss H., aged 19, had always enjoyed good health up to January 1st, 1888. She was plump, well-nourished, and regular in her menstruation. Her period came on as usual in January, but she noticed that the flow was more profuse and lasted longer than was her habit. This occasioned some weakness, but not enough to suggest medical treatment. Her menses during the months of February and March were in advance of the usual time, the inter-menstrual period being shorter than normal; the flow continued a greater number of days and was more profuse. She now began to experience a sensation of heaviness and dragging down in her pelvis, entirely foreign to any previous sensation. During the months of April and May menstruation was continuous and her general health began to suffer. About May 1st, her abdomen was observed to be somewhat enlarged. On May 23d, the enlargement had increased to such an extent, and her health was so depressed that the family physician, Dr. Arthur Williams, of Elk Ridge, Md., was called in. Upon inquiry Dr. Williams obtained the history previously given, whilst a physical examination revealed the abdomen to be markedly distended with fluid and disclosed a tenderness over each ovarian region. The patient's appetite was good, spirits cheerful, and general condition indicated no serious organic trouble. Her heart, kidneys and liver were examined, and nothing found in these organs to account for the ascites. The patient belonged to a tuberculous family on both sides of her house, and she had formerly been troubled with a cough, but her lungs presented no physical signs of serious structural disease.

On June the 1st, Dr. Williams found it necessary to perform paracentesis abdominalis, her abdomen having become so enormously distended with fluid that relief was demanded. The effusion had shown no disposition to disappear under the use of drugs. Two and a half gallons of ascitic fluid were removed at this time. An examination was again made by Dr. Williams with the view of ascertaining the cause of the ascites. The result was negative. Within a few days after the paracentesis, the effusion was again very apparent and continued to increase

rapidly each day. At the request of Dr. Williams I was invited to see the case with him on June the 5th, just five days subsequent to the paracentesis. I found the abdomen considerably distended with fluid at this time. I gave the patient as thorough an examination as circumstances would admit of, and I was forced to agree with Dr. Williams that the origin of the effusion was involved in profound doubt, but we mutually agreed that it was most probably due to some local cause in the pelvic or abdominal cavity which could only be ascertained by an exploratory laparotomy. The uterus was depressed in the pelvis, but it was normal in size and shape. The ovaries could not be made out, and consequently no enlargement of these organs was detected. The abdominal walls were thick, and now distended with fluid, preventing a searching examination by internal and external manipulation. With the history of a tubercular diathesis, the possibility of a tubercular origin of the fluid was considered, but the facts in the case did not seem to sustain this view. That the effusion was not a result of an acute or chronic peritoneal inflammation the history fully showed. Having eliminated every source of doubt as to the origin of the effusion from such causes as cirrhosis, heart and kidney diseases, we were forced to refer the cause to some condition which an examination by present methods employed had not made clear. The continued menorrhagia had induced me to look to ovarian or uterine disturbance as a probable seat of the trouble. With grave doubt as to the real cause, but with strong conviction as to the necessity of ascertaining the same with a view to its possible removal, the importance of an exploratory laparotomy was strongly urged upon the patient and her friends as the only rational and practical solution of the trouble. The risks of the procedure and the possibility of negative results were carefully stated, but it was argued that, if the cause could be found and then removed, recovery might follow. On the contrary, to decline the procedure left only an aimless fight with diuretics, hydragogue cathartics, and the trocar, and doomed the patient to a life of invalidism and possibly to an early death. These facts were taken into consideration by the patient and her friends, and a decision was soon reached. I was courteously invited by Dr. Williams to do the operation on June the 10th. With the assistance of Dr. M. G. Smith and Dr. Thomas Buckler, of this city, and Dr. Williams, the operation was undertaken under strict aseptic precautions. An incision was made through the abdominal walls, permitting the escape of

some three gallons of ascitic fluid [estimated]. The fingers were then introduced and a search made for the cause of the trouble. After a few minutes' search a tumor, about the size of a hen's egg, was found with a mass of intestine packed in the pelvis behind the uterus. Slightly enlarging the incision to admit of the introduction of the hand, a full sweep of the pelvis was obtained and both ovaries were found. The left was small and apparently atrophied; the right had undergone partial cystic degeneration, and was about the size of a billiard ball. In an attempt to bring it through the incision its thin walls gave away, and its contents escaped into the abdomen. The organ and tube of the right side were removed. The tumor first mentioned was solid, a fibro-myoma, without a pedicle, and was enucleated out of its attachments by the fingers. It seemed to spring from the folds of the left broad ligament, but its exact anatomical relations could not be determined nor its position clearly made out. This tumor is believed to have been the cause of the ascites: it had evidently pressed upon an important vessel and occasioned a transudation. A continued search failed to elicit any other condition which could explain the ascitic trouble. I had no hesitation in stating that I believed the cause had been found and removed, and that if recovery followed the laparotomy, the ascites would not recur. Subsequent events have verified this statement. The abdomen was next carefully closed. The wound healed by primary union throughout. The highest temperature reached was 100° on the second day. It then subsided to 99.5° , and after the fourth day was only one-half degree above normal. The patient recovered without a bad symptom, and now at the end of four months is strong and well, without a return of the ascites. The case is of interest from the fact that such an apparently trivial cause should have given rise to such a large effusion in so short a time. From May 1st to June 1st, over two gallons of ascitic fluid had formed and had been removed, whilst from June 1st to June 10th, over three gallons had reaccumulated within the abdomen. The result clearly justifies the means employed: but in all such cases where the cause of ascites cannot be ascertained except by a laparotomy, such an experience as the foregoing seems to warrant a recourse to this procedure.

Laparotomy for ascites is not a new procedure. As far back as 1862 Sir Spencer Wells made an exploratory incision in a case of ascites dependent upon tuberculosis of the peritoneum.

The patient, aged 22 years, unmarried, was suffering from ascites which was believed to be due to a subacute form of tubercular peritonitis, but, as this diagnosis was uncertain, Mr. Wells made an exploratory incision, and found the whole peritoneum studded with myriads of tubercles. The patient made a prompt recovery, and was living and well in 1884.

In looking over the literature of this subject I find it in an unsatisfactory condition. Only here and there can a record be found where an operator has undertaken a laparotomy for ascites pure and simple. In America, during the year 1887, I find only two cases recorded in which laparotomy was undertaken for this condition. In one case, reported by Dr. X. O. Werder, of Pittsburg, Pa., the cause of the ascites was not revealed by the exploration. In Great Britain Mr. Hatherley reports a case of ascites believed to be of tubercular origin, in which a small exploratory incision was made to confirm this diagnosis. The result was stated to be satisfactory.

Laparotomy for ascites, dependent upon ovarian, fibroid, and other intra-abdominal growths is not an infrequent procedure, but it must be borne in mind that the chief indication for the procedure was the removal of the growth and not the discovery of the cause of the dropsical effusion. In such instances the cause has been recognized, and the ascites has been considered as a mere coincidence. It is proper, therefore, that a distinction should be drawn between a laparotomy undertaken for the removal of a morbid growth, in which ascites is a prominent, and it may be a most conspicuous symptom, and an exploratory incision made solely to determine the cause of an abdominal dropsy with a view to the removal of the same. There is a marked difference, and yet no wide distinction between these two procedures. In the first instance a local cause for the symptom has been ascertained, whilst in the second instance the cause is unknown, and the procedure has for its primary object the discovery of the causative influence and the secondary aim to remove the same.

The object of this paper is to assert the importance of the distinction here made. If we are permitted to make a classification of the conditions for which laparotomy may be undertaken, then it appears eminently proper that such a symptom as ascites should come within the scope of the classifications now admitted as justifying this procedure. The time has passed when the physician should rest content to treat ascites with hydragogue cathartics, diuretics, and the trocar, and when he should widen the field of his diagnostic knowledge by invoking the aid of surgery. A mere routine treatment by such agencies should be discontinued when the diagnosis has not been satisfactorily established, and we have an assurance that valuable assistance can be rendered by surgery. It is one of the most encouraging results of modern scientific progress that men can break loose from traditional moorings and approach the treatment of diseases, as well as symptoms, by rational methods. The art of medicine is progressive. If at this end of the nineteenth century we appear too enthusiastic in urging the claims of the knife in preference to the continued use of drugs in such conditions as have been defined, it must be borne in mind that we are guided by practical experience, and not by theoretical considerations.

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